

1 **WHAT IS CLAIMED IS:**

2 1. A direct-light illuminating backlight unit with a reflective structure
3 for a liquid crystal display, comprising
4 a case having a front opening as a light-emitting face, a frame and a
5 back connected to the frame, wherein the light-emitting face has at least one
6 brighter region and at least one dimmer region;
7 at least one light-emitting source mounted inside the case align with the
8 back, wherein the at least one brighter region is immediately in front of the
9 light-emitting source and the at least one dimmer region is away from the light-
10 emitting source forms a dimmer region; and
11 a reflective layer formed on the back and composed of multiple
12 reflective protrusions, each reflective protrusion having at least one inclined
13 face, wherein the reflective protrusion corresponds to the least one light-
14 emitting source, wherein each inclined face projects reflected light onto the at
15 least one dimmer region;
16 whereby light radiated backward from the at least one light-emitting
17 source strikes the reflective layer, is projected toward the at least one dimmer
18 region, and thus reduces uneven luminance between the at least one brighter
19 region and the at least one dimmer region.

20 2. The illuminating backlight unit as claimed in claim 1, wherein each
21 reflective protrusion has two inclined faces and a salient aligned with the
22 corresponding light-emitting source, wherein each inclined face projects
23 reflected light onto an adjacent dimmer region.

24 3. The illuminating backlight unit as claimed in claim 1, wherein the at

1 least one light-emitting source is a tubular lamp.

2 4. The illuminating backlight unit as claimed in claim 1, wherein the at
3 least one light-emitting source is a straight tubular lamp.

4 5. The illuminating backlight unit as claimed in claim 1, wherein the at
5 least one light-emitting source is a looped tubular lamp in W shape.

6 6. The illuminating backlight unit as claimed in claim 1, wherein the at
7 least one light-emitting source is a looped tubular lamp in U shape.

8 7. The illuminating backlight unit as claimed in claim 1 further
9 comprising a diffuser plate mounted at the front opening to disperse outgoing
10 light evenly.

11 8. The illuminating backlight unit as claimed in claim 7 further
12 comprising a diffuser sheet laid on top the diffuser plate.

13 9. The illuminating backlight unit as claimed in claim 7 further
14 comprising a prism sheet laid on top the diffuser plate.

15 10. The illuminating backlight unit as claimed in claim 2, wherein each
16 inclined face is flat.

17 11. The illuminating backlight unit as claimed in claim 2, wherein each
18 inclined face is concave.

19 12. The illuminating backlight unit as claimed in claim 2, wherein each
20 inclined face is convex.

21 13. The illuminating backlight unit as claimed in claim 1, wherein the
22 multiple reflective protrusions are formed integrally with the back of the case..